Evaluation of Water Conservation Tax Incentives

The purpose of this report is to fulfill the requirements in House Bill 1832, Section 32 (5) from the 2001 legislative session. Specifically, this subsection states:

> *The office of financial management, in consultation with the departments of revenue, health, and ecology, must evaluate the long-term revenue impacts and the costs and benefits of the deductions and exclusions authorized by section 26 of this act. The office of financial management must also evaluate the costs and benefits and revenue impacts of other potential water conservation tax incentives, including but not limited to those that may involve the sales, use, property, utility, and business and occupations taxes. The office of financial management must report its findings regarding tax incentives by December 31, 2001, to the legislature's standing committees with jurisdiction over water resources and the legislative fiscal committees.*

Executive Summary

During the 2001 legislative session, the Legislature adopted, and the Governor signed into law, a tax-incentive program for water utilities that was created to improve water-use efficiency and promote use of reclaimed water. The legislation established a public utility tax deduction of 75 percent of funds spent to improve consumers' efficient use of water, and a public utility tax exemption for 75 percent of receipts for supplying reclaimed water.

In the water-use deduction, a water utility that takes conservation measures, such as making low-flow showerheads or toilets available to customers, is allowed to subtract 75 percent of the cost of those measures from the utility's gross income when it calculates its public utility tax. Last year, 550 water utilities paid the tax. For each $10,000 those utilities spent on eligible conservation measures, the tax incentive would provide a savings to the utility of $377.

In the water-reclamation exemption, a water utility that reclaims sewage or industrial process water and sells it to an entity, such as a golf course or park, must pay a public utility tax on just 25 percent of the receipts of that sale of reclaimed water, rather than 100 percent. There are currently 15 reclaimed-water facilities in the state. At this time there is only one that is generating enough revenue to be subject to the public utility tax.

A Water Rights Trust Account was also created in the legislation. The Legislature intends to appropriate from the General Fund an amount equal to one-third of the total tax savings resulting from the public utility tax deductions, and place that sum into the new account each fiscal year. Funds in the account will be used to purchase or lease water rights to augment in-stream flows in streams supporting fish stocks that are listed as

threatened or endangered under federal law or listed as depressed or threatened by reason of inadequate stream flows under state law.

In addition to the tax incentives, the Legislature mandated the preparation of a report evaluating the long-term revenue impacts, costs, and benefits of the tax measures, and other potential incentives. This report has been prepared in response to that requirement.

The Water Utility Survey

To assist in the evaluation of the new tax incentive program, the Department of Health (DOH) contracted with the Social and Economic Sciences Research Center, Washington State University (WSU), to conduct a survey of 458 water utilities that paid a public utility tax in calendar year 2000. The principal findings of the survey were:

- A majority of respondents (81 percent) indicated that they did not participate in the tax-incentive program.
- A majority of respondents (67 percent) who did not participate in the program indicated that the main reason they did not file a claim was that they were not aware of the program.
- Respondents felt that offering financial incentives to provide assistance with leak detection/repair, repair of water mains, and replacing lost revenue from conservation would be the most effective.
- A large percentage of the respondents felt that providing financial assistance for industrial customer process audits and assistance with industrial customer water efficiency measures would not be an effective incentive.
- Respondents indicated that interest-free loans and direct payments were the most effective financial incentives.
- Low-interest loans were not considered to be effective financial incentives.
- Respondents were unsure about how effective expansion of the existing program of public utility tax incentives would be for their utility.
- Only 22 percent of respondents indicated that they likely would claim the tax incentive in 2002, and only 23 percent indicated they would claim the incentive in 2003. Several respondents indicated that they were not sure whether they would claim the incentive in either 2002 (20 percent) or 2003 (41 percent).

Revenue and Other Impacts

Projections made prior to enactment of Engrossed Substitute House Bill (ESHB) 1832 estimated that revenue losses resulting from the implementation of the conservation deduction would be about $435,800 in FY 2002 and $459,600 in FY 2003. These projections were based on estimates of the total amount water utilities spend on conservation measures and assumed that all eligible utilities would claim the deduction. The WSU survey results suggest that actual revenue losses will be less due to low utility participation in the tax-incentive program. Based on survey results, revenue losses are projected to be in the range of $67,000 to $120,000 for FY 2002 and from $84,000 to $220,000 for FY 2003. Similar revenue impacts could be expected for future years if the current program, which expires in June 2003, is extended.

The survey results suggest that the program has not been in existence long enough to determine the effectiveness of the tax incentives in increasing water conservation or use of reclaimed water. Only ten utilities in the survey indicated they had claimed the deduction as of the survey date and only two indicated they were planning to re-invest their savings in conservation measures.

Other Potential Incentives

The survey results indicate that targeting the public utility tax, rather than other possible taxes such as the business and occupation (B&O) tax, sales tax, or use tax, is likely the most effective tax incentive for conservation measures targeted to consumers by water utilities. However, the survey results also indicate that the existing tax incentive could be made more effective if it were expanded to include additional eligible costs such as leak detection measures, leak repair, and replacement of revenue lost from implementing conservation measures.

Construction of water reclamation projects might be encouraged with a sales and use tax exemption on construction or a property tax exemption on the finished facility. Currently, only one existing water reclamation project appears to be eligible for the public utility tax exemption for reclaimed water created by ESHB 1832. Some of the other projects are too small, therefore their sales of reclaimed water are exempt from the public utility tax. Others have been constructed by the entity using the water, often municipalities. In this case there is no sale of water so no public utility tax is due. A sales tax exemption on project construction would act as a significant incentive to both public and private entities interested in using reclaimed water. A property tax exemption could provide an incentive to private builders to construct reclaimed water projects. However, the property tax incentive would not work for municipal projects since municipalities do not pay property taxes.

The survey of Washington utilities and the experience of other states suggest that the use of grants and low- or no-interest loans may be more effective than tax deductions in promoting conservation and reclaimed water use.

Conclusions and Recommendations

The survey of water utilities, available tax data, discussions with utilities, and information obtained from other states, indicates the following:

- The public utility tax appears to be an effective tool for a tax incentive for consumer-oriented water conservation measures and programs that could be done by water utilities. However, program participation by utilities likely would increase if the tax deduction were expanded from just consumer-oriented activities to include those that the utility itself can undertake – such as leak detection and control. Increasing the amount of savings obtainable by increasing the deduction or changing it to a tax credit would also likely make the tax incentive more effective.

- The public utility tax exemption for the sale of reclaimed water does not apply to most existing projects. For several reasons, most projects are not paying the public utility tax on reclaimed water. A sales tax exemption on the construction of the project or a property tax exemption on privately-owned projects might create a stronger incentive to build water reclamation projects.

- Experience of other states, as well as survey results, suggests that programs other than tax incentives – such as grants and low- or no-interest loans – may be more effective in encouraging conservation and recycling, and should be included when considering future incentives. Such incentives could also be made available to small systems that do not benefit from the current tax incentive because they do not generate enough revenue to be subject to the public utility tax.

- Agencies should improve communication efforts to make this program more widely known among utilities. Despite extensive efforts to inform utilities about the program, the survey indicated that a high number of utilities were not aware of the program's existence.

- To date, the tax incentive program has not resulted in any significant change in utility behavior to encourage more conservation on the part of their water customers. However, the new tax incentive program has not been in place long enough to fully evaluate its effectiveness. Also, the relatively short time that the program has been in place may be a factor contributing to the lack of knowledge by utilities about the tax incentive.

I. Background

A growing state population has increased the demand for domestic water supplies for commercial and industrial use, power generation, and agriculture. At the same time, wild salmon populations are in decline. All but one county in the state host at least one salmon, trout, or steelhead species with a current Endangered Species Act designation. Increased stream flows are being used to enhance species recovery, but this reduces the amount of water available to meet other demands such as power generation and irrigation.

Furthermore, a recent Department of Ecology report on water storage noted that growth and development of many communities, as well as rural economic growth, has been hindered by a lack of water. Overlaying the growing demand for existing water, the drought of 2001 served to significantly aggravate the water situation in the short term and focus attention on conservation and measures that most efficiently use the state's water resources.

During the 2001 legislative session, the Legislature began to address some of the state's long-term water needs with the passage of Engrossed Substitute House Bill 1832 (ESHB 1832). With this legislation, the Legislature committed itself to meeting the needs of a growing population and a healthy economy statewide as well as meeting the needs of fish and healthy watersheds statewide.

The Legislature recognized that improved management of the state's water resources, clarifying the authorities, requirements, and timelines for establishing in-stream flows, providing timely decisions on water transfers, clarifying the authority of water conservancy boards, and enhancing the flexibility of our water management system to meet both environmental and economic goals are all important steps to providing a better future for our state. However, the Legislature also recognized that deliberative action over several legislative sessions and interim periods between sessions will be required to address all the issues and goals related to the state's long-term water situation.

Through ESHB 1832 the Legislature provided several tools to enable the state to respond to imminent drought conditions as well as other immediate problems relating to water resources management. One of these tools is a public utility tax exemption for amounts received for water services supplied by an entity with a reclaimed water permit for industrial and commercial uses of water when the water supplied is reclaimed water. Another allows a utility to deduct from its gross income for calculating the public utility tax amounts expended to improve consumers' efficiency of water use or otherwise to reduce the use of water by consumers.

These tax provisions expire on June 30, 2003. The Legislature intends to appropriate amounts that are based on these tax reductions into the newly created Water Rights Trust

Account for use by the state Department of Ecology, after appropriation, to purchase or lease water rights to augment flows in certain streams.

ESHB 1832 also requires the Office of Financial Management, in consultation with the Departments of Revenue, Health, and Ecology, to evaluate the long-term revenue impacts and the costs and benefits of the public utility tax deductions and exclusions authorized in the legislation. The Office of Financial Management must also evaluate the costs and benefits and revenue impacts of other potential water conservation tax incentives, including but not limited to those that may involve the sales, use, property, utility, and business and occupations taxes. This report has been prepared in response to that requirement.

II. The Public Utility Tax Study

Engrossed Substitute House Bill 1832 (ESHB 1832) created two new tax mechanisms intended to provide an incentive for water distribution businesses to help reduce their customers' use of water. Section 26 of ESHB 1832 added a new section to 82.16 RCW that specifically recognizes the role of conservation in an overall water management program by providing a tax incentive to help utility customers reduce water use and promote use of reclaimed water.

When calculating the public utility tax, Section 26(2) of ESHB 1832 allows a water system or water utility to deduct from gross income seventy-five percent of those amounts expended to improve consumers' efficiency of water use or to otherwise reduce the use of water by the consumer. These expenditures must used to implement elements of a conservation plan within a state approved water system plan or a small water system management program.

Section 26(3) exempts from the public utility tax seventy-five percent of the amounts received for water services supplied by an entity that holds a permit under RCW 90.46.030 when the water supplied is reclaimed water as defined in RCW 90.46.010. Total deductions taken under both Section 26(2) and Section 26(3) and the resulting tax savings must be reported to the state Department of Revenue at the time the tax is due. Both tax deductions expire on June 30, 2003.

To qualify for the public utility tax deductions in Section 26(2), a measure must assist customers of a water system or utility in reducing water use. Eligible measures could include but are not limited to (1) water conservation and outreach programs, distributing shower flow restrictors, toilet tank water displacement devices, and leak detection dye tablets; (2) providing water-efficient fixtures at no cost, giving a rebate for customer-purchased fixtures, or arranging for suppliers to provide fixtures at a reduced price; (3) providing plants for low-water demand landscaping, moisture sensors, flow timers, low-volume sprinklers, and drip irrigation systems; and (4) using conservation pricing and

billings that show percentage increase/decrease in water use over the same period from the previous year. Measures such as leak detection and repair of water mains that would assist a water system or utility in reducing its own water loss are not eligible for the public utility tax deductions in Section 26 of ESHB 1832.

A Water Rights Trust Account is created in Section 26(4) of ESHB 1832. It is the intent of the Legislature that an amount equal to one-third of the total tax savings resulting from the public utility tax deductions in Sections 26(2) and Section 26(3) in each state fiscal year shall be appropriated from the General Fund-State and placed in the new state Water Rights Trust Account. Moneys in the account may only be used by the Department of Ecology, in consultation with the Department of Fish and Wildlife, to purchase or lease water rights to augment in-stream flows in streams supporting fish stocks that are listed as threatened or endangered under federal law or listed as depressed or threatened by reason of inadequate stream flows under state law.

In addition, ESHB 1832 contains the following instructions in Section 32 for preparation of a report to the Legislature regarding the public utility tax incentives in Section 26:

> *Section 32 (5) The office of financial management, in consultation with the departments of revenue, health, and ecology, must evaluate the long-term revenue impacts and the costs and benefits of the deductions and exclusions authorized by section 26 of this act. The office of financial management must also evaluate the costs and benefits and revenue impacts of other potential water conservation tax incentives, including but not limited to those that may involve the sales, use, property, utility, and business and occupation taxes. The office of financial management must report its findings regarding tax incentives by December 31, 2001, to the legislature's standing committees with jurisdiction over water resources and the legislative fiscal committees.*

This study is intended to provide information on the performance of the two public utility tax deductions in Section 26(2) and Section 26(3) of ESHB 1832. It will also provide information on other potential water conservation tax incentives that could be used in addition to or instead of the tax incentives provided in ESHB 1832.

III. Taxpayer Information and Education

Following adoption of ESHB 1832, the state Department of Ecology (Ecology), the Department of Health (DOH), and the Department of Revenue (DOR) began several efforts to alert and inform utilities about the new tax incentive.

- DOH staff made a number of presentations to utilities informing them about the tax incentive. Among those attending the presentations were the Washington Water Utility Council (WWUC), the Water Supply Advisory Committee (WSAC), and the Water Resource Advisory Committee (WRAC).

- DOH provided a description of the new deductions on the front page of the September 2001 issue of the "Water Tap" newsletter that was sent to more than 4000 water utilities statewide.

- DOH prepared and distributed a fact sheet and made it available on the Division of Drinking Water's web site at http://www.doh.wa.gov/ehp/dw/fact_sheets/publicutilityfs.htm.

- Ecology prepared and distributed a 'focus' sheet to existing and proposed reclaimed water facilities describing the deductions. The focus sheet was also made available on Ecology's web site at http://www.ecy.wa.gov/biblio/0110044.html.

- DOR included an education piece in the June issue of *Tax Facts* and mailed a Special Notice to taxpayers in August 2001.

A copy of each of the four documents is included in Appendix 1.

IV. Water Utility Survey

In response to the requirement for a report to the Legislature, DOH, DOR, Ecology, and the Office of Financial Management (OFM) jointly developed an approach for the report preparation. DOH assumed the lead for conducting studies deemed necessary to obtain the information requested by the Legislature. A study design was developed by DOH with input from the WWUC. Due to strict confidentiality requirements related to tax information submitted to the state, a confidential survey of utilities was determined to be the best approach to obtain the information needed to assess the effectiveness of the tax-incentive program.

DOH developed a list of objectives and draft survey questions. A contract was signed with the Social and Economic Sciences Center at Washington State University (WSU) to develop the final questionnaire, and format and administer the survey. DOH coordinated with DOR to develop the mailing list, which was used by WSU to contact utilities subject to the public utility tax. DOR records indicated that 550 water utilities paid the utility tax in fiscal year 2001. However, a complete correlation with DOH records of water utilities was not feasible. The final list of utilities to be contacted and provided to WSU consisted of 458 utilities that DOH confirmed as being a water utility.

Response to the survey was excellent. About 71 percent of the contacted water utilities returned completed survey forms or used the website form. The high response rate is partly due to the strong support of WWUC. In addition to participating in the study design and development of the survey questionnaire, a letter was sent by the chair of the WWUC to all member utilities encouraging their support by responding to the survey. Utilities were provided the choice of responding by completing and returning a paper version of the questionnaire, or by submitting the questionnaire using an internet-based form. WSU followed up with non-responding utilities by sending a postcard reminder, a second letter, and finally, a phone call.

Results of the survey are summarized in the following section and were used in development of the subsequent sections that discuss the impacts of both the existing tax incentive and potential tax incentives. A copy of both the technical and data reports prepared by the Social and Economic Sciences Center, WSU are attached as Appendix 2 and Appendix 3. Included in the data report is a copy of the questionnaire used in the survey.

Summary of Key Findings

A summary of key findings and details of the responses to each survey question are included in the WSU report. The principal findings of the study are:

- A majority of respondents (81 percent) indicated that they did not participate in the tax-incentive program.
- A majority of respondents (67 percent) who did not participate in the program indicated that the main reason they did not file a claim was that they were not aware of the program.
- Respondents felt that offering financial incentives to provide assistance with leak detection/repair, repair of water mains, and replacing lost revenue from conservation would be the most effective.
- A large percentage of the respondents felt that providing financial assistance for industrial customer process audits and assistance with industrial customer water efficiency measures would not be an effective incentive.
- Respondents indicated that interest-free loans and direct payments were the most effective financial incentives.
- Low-interest loans were not considered to be effective financial incentives.
- Respondents were unsure about how effective expansion of the existing program of public utility tax incentives would be for their utility.

- Only 22 percent of respondents indicated that they likely would claim the tax incentive in 2002, and only 23 percent indicated they would claim the incentive in 2003. Several respondents indicated that they were not sure whether they would claim the incentive in either 2002 (20 percent) or 2003 (41 percent).

These findings and additional details of the responses to the survey were used to estimate the future impact of the tax incentive program on state revenue. The projections and basis for them are discussed in the following section.

V. Impacts of the Conservation Tax Deduction

Background of State Public Utility Tax

The state public utility tax is levied on the gross income derived from operation of public and privately owned utilities, including transportation, telegraph service, and the supply of energy and water. Income from utility operations is taxed under the public utility tax and is in lieu of the state business and occupation (B&O) tax. Other income of a utility firm, such as retail sales of tangible personal property, is subject to the state B&O tax. There are five different rates that are applied depending upon the specific utility activity. The public utility tax rate for the distribution of water is 5.029 percent.

There are a few exemptions and deductions from the public utility tax. Utilities with gross income less than $2,000 per month are exempt. Small irrigation and water and sewer districts may exempt gross income from the public utility tax provided other statutory qualifications, such as charging residential rates that exceed 125 percent of the statewide average residential rate, are met. A non–profit may deduct revenues if the revenues are used only for capital improvements. The revenues earned by an irrigation district can be deducted if those revenues are derived solely from water sold for irrigation purposes from gross income. Some irrigation districts serve residential customers and revenues from those customers are subject to the public utility tax. Also, in the case of a municipally owned water company, receipts from taxes levied for the support or maintenance of the water company may be deducted from gross income. Last year, 550 water utilities paid the public utility tax.

The state Department of Revenue collects the public utility tax. Utility firms report by filing the combined excise tax return either monthly, quarterly, or annually. The size of the utility determines its frequency of reporting with the largest utilities reporting monthly and the smallest annually. Most of the public utility tax goes into the General Fund-State. Certain receipts are earmarked for the Public Works Assistance Account. This account provides financial assistance to local governments for maintenance of pub-

lic works facilities. Twenty percent of the 5.029 percent tax on water distribution is deposited in the Public Works Assistance Account.

Near Term Revenue Impacts

DOR projections made prior to enactment of ESHB 1832 estimated that revenue losses resulting from implementation of the conservation deduction would be about $435,800 in FY 2002 and $459,600 in FY 2003. These projections were based on estimates of the total amount water utilities spend on conservation measures and assumed that all eligible utilities would claim the deduction. The WSU survey results suggest that actual revenue losses will be much less due to low utility participation in the tax incentive program.

The tax incentive that became effective May 10, 2001 has not had a significant impact on state revenue to date. Only 16 survey respondents (5 percent) indicated that they were participating in the tax incentive program as of early November 2001. DOR data available for the four-month period ending November 30, 2001, tends to corroborate the survey results. DOR tax data indicates that 14 utilities claimed a total of $345,000 in deductions for conservation-eligible expenditures in the first four months of FY 2002. At the current public utility tax rate of 5.029 percent, the deductions taken have reduced utility taxes by about $17,300 for that period – with a corresponding reduction in state revenue.

If current data for FY 2002 were considered typical of future deductions, the annual reduction in state revenue due to the public utility tax conservation deduction would be about $52,000 for FY 2002. However, responses to the survey indicate that the number of utilities participating is likely to increase from about 16 to 30 or more over the next two years.

Twenty-four utilities responded that they were very likely to participate by 2003 and 36 additional utilities said they were somewhat likely to participate. Also, six water utilities indicated that they are participating in the program, but have not yet claimed the deduction. These may be utilities that are required to pay the tax on a quarterly or annual basis and will claim the deduction in future months as their taxes become due. The frequency of tax payments is based on utility size, with large utilities filing on a monthly basis, medium-sized utilities filing on a quarterly basis, and small utilities filing on an annual basis.

To estimate the revenue impacts of the tax incentive program, it was assumed that all systems responding as likely to claim the deduction in calendar years 2002 and 2003 would do so. It also was assumed that either none or all of those systems responding as somewhat likely to claim the deduction would do so. The minimum and maximum values shown in Table 1 reflect that range. A third assumption was that the increase from the 13 utilities claiming the deduction in the first quarter of Fiscal Year 2002 to the estimated final number that will participate by Fiscal Year 2003 is linear. It also was assumed that utilities that were somewhat unlikely, unsure, or did not respond to the survey at all would not claim the deduction. It also was assumed that the tax deductions claimed to

date are representative of the average deductions that will be taken in the future. Using these assumptions, the range of projected tax revenue losses is shown in Table 1 below. Supporting calculations are included in Appendix 4.

Table 1. Tax Revenue Loss Projections

Fiscal Year	Minimum	Maximum
2002	$67,000	$120,000
2003	$84,000	$220,000
Total	$150,000	$340,000

Available tax data and survey responses indicate that some of the largest water utilities in the state, which may have the largest potential deductions, neither participated in the survey nor claimed any deductions. Some of these larger water utilities, which pay the public utility tax on a monthly basis, may be electing to summarize their conservation expenses on an annual basis and claim the deduction only once a year. Since these large utilities typically have the largest expenditures for conservation measures, their potential future participation in the tax incentive program could significantly alter the projections of revenue impacts.

More definitive data on which to base tax-revenue projections will be available in February 2002, when end of year taxes will have been paid and utility participation in the deduction program will be better defined. It is important to note that the original fiscal note prepared for this program assumed participation of the 20 largest utilities, not all of which participated in the survey. Given the potential benefit to these utilities and their large conservation program budgets, it is likely that they will participate and the original fiscal impact of approximately $500,000 per year should be considered a possibility.

Long Term Revenue Impacts

The public utility tax deduction was first available in May 2001 and significant efforts were made by DOR, DOH, and Ecology, as described above, to inform utilities about the new program. Despite these efforts, 68 percent of the water utilities surveyed indicated they were not aware that the deduction was available. Conducting the survey may have served as a useful technique for increasing awareness of the tax incentive and could lead to increased participation over the long term if the program is extended beyond the current expiration date of June 2003.

Accordingly, it is estimated that if the program were extended, the revenue losses would be similar to the estimated maximum for FY 2003, or about $220,000 per year. As mentioned above, the participation of more of the largest utilities in the state could significantly increase the revenue loss.

Costs and Benefits

Costs

The tax incentive program has certain costs beyond revenue loss to the state. Utilities that wish to participate have to expend resources to determine the amount of the deduction to claim. DOR, Ecology, and DOH have incurred costs in educating utilities and implementing the program. With the exception of the cost of the survey used to assist in the preparation of this report (about $16,000), these associated costs are considered a part of normal agency operations and have not been tracked in a separate account.

Benefits

One of the principal goals of the public utility tax deduction for conservation measures is to encourage water utilities to change their behavior by encouraging more conservation on the part of their water consumers. So far, participation in this tax deduction program has been minor. Only 16 survey respondents (5 percent) indicated that they were participating in the tax incentive program as of early November 2001. Of those 16 only three indicated that the tax incentive caused them to increase their conservation efforts. DOR data indicates that only 14 utilities claimed a total of $345,000 in deductions for conservation-eligible expenditures in the first four months of FY 2002.

The lack of response to the tax incentives in their first few months and minimal changes to existing conservation programs may have several causes:

- First, four months of collection experience is a very short time period on which to base a conclusion. No annual taxpayers are included since they are not required to report until the end of the year. Most taxpayers taking the deductions are monthly taxpayers, the largest. Even the largest taxpayers may defer taking the deduction until the end of the year or some other convenient time frame.

- Second, taxpayers taking the deductions already had conservation programs in place or planned and could take early advantage of the tax incentives. The conservation measures implemented had to be in an approved plan to be eligible for the deduction.

- Third, utilities without existing programs require some time to plan and implement a qualified conservation program, especially if they have not done so in the past and have no experience with such programs. Furthermore, such plans must go through the state approval process. DOH is not aware of any new conservation plans or changes or amendments to existing programs from the 14 utilities that have claimed the deduction to date. In one case, the City of Issaquah, a water system plan that was in the process of being developed was modified to include an enhanced conservation program for the purpose of taking advantage of the tax incentive.

- Fourth, most utilities budget on an annual or longer basis and it is unlikely that any significant changes would be made to implement new conservation measures until their new budget cycle. Accordingly, unless that cycle has started since the new tax law became effective, it is unlikely they have implemented new measures as a result of the tax law.

- Fifth, large utilities are required to plan capital improvements on a 6-year cycle. Those plans are subject to review and approval, not only by the utility's board of directors, but by DOH and are thus not easily modified. Any additions to the utility's conservation measures which would require a change to the approved plan would therefore be time consuming and unlikely to have been made in the few months since the tax incentive became effective.

- Sixth, many utilities indicated that they were unaware of the incentives despite the information and education efforts of DOH, Ecology, DOR and WWUC.

- A seventh possible reason is that the tax incentive is not significant enough. In the survey, 289 respondents gave an answer as to why they did not participate. As mentioned above, most of those said they were not aware of the program. However, of the 95 survey respondents that were aware of the program, but had not participated, 26% (25 respondents) said they were not participating because the amount saved by the taking the deduction was not large enough. During meetings and discussions with utilities and utility organizations across the state, utilities have almost universally commented that the current tax incentive is not large enough to cause them to make any changes in their conservation efforts.

Because of the low rate of participation in the tax incentive program, documented benefits have been minimal to date. When the ten respondents currently claiming to be taking the tax deduction were asked which conservation measure they were claiming to get the deduction, four mentioned education programs and three mentioned outreach programs. Only two utilities reported that they reinvested their tax savings in conservation measures. Three utilities indicated that they increased spending on conservation because of the program. However, it must be emphasized that the survey was conducted only five months after the program went into effect, and more benefits can be expected to accrue with more utilities participating in the future. Of those utilities that responded to the survey, 21 said they were very likely to claim the tax deduction in 2002, and 36 were somewhat likely to claim it.

VI. Reclaimed Water Tax Exemption

Engrossed Substitute House Bill 1832 included an incentive program exempting seventy-five percent of the amounts received for reclaimed water services for commercial and industrial uses from the state public utility tax. There are currently fifteen existing reclaimed-water facilities in the state of Washington. Another fifteen projects are in various stages of planning. A list of the existing and proposed reclaimed water facilities is included as Appendix 5. The facilities were contacted to determine whether or not they were taking advantage of the tax exemption.

At this point, only one of the existing reclaimed water projects, the City of Snoqualmie, is receiving enough revenue from reclaimed water sales to be subject to the public utility tax. Most reclaimed-water facilities are using reclaimed water for public purposes such as landscape irrigation in public parks and groundwater recharge. The sale of reclaimed water is subject to the public utility tax. However, where a municipally owned water utility is providing reclaimed water and the reclaimed water is being used for municipal purposes, no sale has occurred and no public utility tax is due**.**

The Holmes Harbor Sewer District that provides golf course irrigation water was constructed through a public-private partnership in which the private entity helped fund the reclamation facility and receives the water for golf course use at no charge. The City of Snoqualmie plans on taking the utility tax exemption on the reclaimed water they are selling for use at a private PGA golf course and for use by other commercial customers for irrigation. In 2000, the city received approximately $30,000 in revenue. Projections for eligible revenue in 2001 are more than $40,000.

One other proposed project may also qualify if constructed before the June 30, 2003, expiration date of the new law. The Cowlitz Regional Wastewater Treatment Plant intends to provide up to 2.3 million gallons a day (MGD) of reclaimed water for use at an energy co-generation facility in Longview. The monthly charge for the reclaimed water is established in a contractual agreement at a flat usage fee of $7,500 monthly ($90,000 annually).

Given the low projected sales for reclaimed water, projected revenue losses are minimal. Assuming Snoqualmie does participate in the program in calendar years 2001 and 2002, and that the Cowlitz facility participates in 2002, projected revenue losses are estimated to be $1,500 for FY 2002 and $4,900 for FY 2003. Given that these are the only two projects likely to qualify for the exemption before the current law expires, no significant long-term impacts on state revenue are projected.

VII. Other Potential Incentives

Other Incentives for Water Conservation Expenditures for Consumers

Engrossed Substitute House Bill 1832 authorized a deduction from a utility's gross income equal to seventy-five percent of those amounts the utility expended to improve its consumers' efficiency of water use or to otherwise reduce the use of water by the consumer when the expenditures used for implementing elements of the utility's conservation plan within a state approved water system plan or a small water system management program.

Increasing the deduction to 100 percent is one alternative to the current 75 percent deduction. In the public utility tax survey 14 respondents replied that the deduction was not enough when asked the main reason they did not claim the deduction. When asked if there was anything about the program that they would like to change, seven respondents said increased levels of incentives. Meetings and discussions DOH staff held with utilities and utility organizations across the state confirmed the survey results.

The utilities have almost universally commented that the current tax incentive is not large enough to cause them to make any changes in their conservation efforts. Increasing the deduction from 75 percent of water conservation measures targeted at consumers to 100 percent, or changing the incentive from a deduction to a tax credit would be a substantial expansion that could induce additional water utilities to undertake these measures.

Other taxable activities directly related to consumer-oriented water conservation expenditures could also be exempted from applicable taxes. For example, a utility may decide to provide to consumers free of charge or at minimal cost, such tangible personal property as low-flow showerheads, low-flow toilets, leak detection tablets, and landscape moisture sensors, among other things. The utility must pay sales and use tax on the purchase of such items of tangible personal property. These items could be made exempt from the state and local sales and use taxes.

A water utility may decide to meter service that had not been metered before or replace old inefficient water meters with new ones. This activity may qualify for the public utility deduction in ESHB 1832. However, the utility will still either pay sales and use tax on the meters when it purchases them or collect the retail sales tax from the consumer at installation and pay the state business & occupation (B&O) tax. Furthermore, the utility will pay the B&O tax at the construction-service rate if the customer is a new customer or the public utility tax if an existing customer. To encourage utilities to install efficient meters, the purchase, sales and fees for installation of water meters could be exempted from state and local sales or use taxes and state B&O and state public utility taxes.

Appendix 6 provides a brief outline of the current tax treatment of some water conservation expenditures for consumers as well as some suggestions for possible tax incentives.

Other Incentives for Reclaimed Water

Engrossed Substitute House Bill 1832 included an incentive program exempting seventy-five percent of the amounts received for reclaimed water services for commercial and industrial uses from the state public utility tax. There are currently 15 existing reclaimed-water facilities in the state of Washington with another fifteen projects in various stages of planning. However, only one of the existing reclaimed water projects, the City of Snoqualmie, is receiving enough revenue from reclaimed water sales to be subject to the public utility tax.

Other existing projects have sales that are small enough that they are exempt from the public utility tax, or do not pay any public utility tax because they are using the water and not selling it. For these reasons, the public utility tax exemption in ESHB 1832 is unlikely to provide much incentive for the construction of additional water reclamation projects.

There are, however, more effective incentives that could be put into place to encourage construction of water reclamation projects. Capital costs for water reclamation facilities vary widely depending upon the class of reclaimed water achieved, the facility size, whether the facility is new or an upgrade to an existing facility, the type of distribution system, and the end uses. Most of the reclaimed water facilities in Washington have been Class A facilities with a design capacity of one million gallons per day (MGD) or less.

Even for a relatively small reclaimed water facility the capital costs can be substantial. For example, the Class A reclaimed water facility in Ephrata with a capacity of 1.12 MGD cost $6.8 million in 1996 dollars. The 0.25 MGD reclaimed water facility in Royal City cost $3.7 million in 1996 dollars. A discussion of the capital costs of water reclamation facilities appears in Appendix 7. Expanded descriptions of some reclaimed water projects planned for Washington are included in Appendix 8.

Construction costs of the water reclamation facility can run into the millions of dollars. Construction of an infrastructure to distribute the reclaimed water and the infrastructure to use reclaimed water are also capital intensive. Under current state tax laws, the state and local sales or use tax is due on these projects. On multimillion-dollar projects, state and local sales tax can be significant. This suggests that an exemption from the sales tax on these projects could produce a significant incentive to build them as the state sales tax is currently 6.5 percent. When local sales taxes are added to the state sales tax, total sales taxes range from 7.0 percent to 8.9 percent, depending on location.

Municipal water reclamation facilities are not subject to the property tax. However, private facilities are subject to state and local property taxes. Since these project costs can total millions of dollars, the property taxes can be significant. Another tax incentive to encourage the private construction of water reclamation projects could be a property tax exemption. For example, the project could be made exempt from property taxes for the first ten years.

It should be noted at this point that property taxes are collected locally. An exemption like the one mentioned above would impose a new burden on county assessors and treasurers since they would have to keep track of the exemption and how long it had been in place.

Survey Responses on Incentives

To assess other possible tax incentives for encouraging conservation and increased use of reclaimed water, the WSU survey included several questions to solicit recommendations from water utilities. Utilities were asked if their conservation programs would be enhanced if the tax incentives were targeted towards the B&O tax, the sales tax, or the public utility tax.

Incentives targeting the public utility tax were considered the most likely to enhance conservation with 42 percent of respondents indicating it was at least somewhat likely to do so. Thirty-six percent indicated that targeting the B&O tax would enhance conservation, followed by 30 percent indicating that targeting the sales tax would enhance the program. The responses were not mutually exclusive, so a utility could indicate that targeting all three taxes would result in enhancement of the conservation program.

The use tax was not specifically identified in the survey as it is essentially the same as the sales tax and is combined with sales tax in revenue reports. Property taxes were also not specifically identified in the survey. Property taxes, which are collected by local taxing authorities rather than DOR, would add considerable complexity to administration of the program. The administrative costs of establishing mechanisms for the state to reimburse local agencies for possible property tax deductions would likely be substantial, and this option was not further evaluated.

Based on the survey results and previous analysis, it appears that the existing public utility tax deduction may be the most effective tax incentive for conservation. However, the survey results also indicated that the existing tax incentive could be made more effective if it were expanded to include additional eligible costs. The existing program allows only those expenses attributed to enhancing customer conservation measures to be deducted.

The survey results indicate that the program could be more effective if utility expenses incurred to save water could be deducted. Seventy-seven percent of the responding utilities indicated leak detection measures would be increased if financial incentives were provided. Repair of water mains and replacing lost revenue due to conservation were the other two measures rated as most likely to improve conservation if supported by financial incentives.

Appendix 6 provides a brief outline of the current tax treatment of some general water conservation expenditures and other measures as well as some suggestions for possible tax incentives in these areas.

Incentives Used in Other States

To determine if other states have had different experiences or used alternative measures for improving conservation and reclaimed water use, phone surveys and literature searches were conducted by DOH and Ecology. These efforts confirmed that Washington is one of the leading states in conservation. In 1998, the federal Environmental Protection Agency published *Water Conservation Plan Guidelines* that showed only 17 jurisdictions, including Washington State, require water conservation planning. Of those 17 jurisdictions, even fewer have implemented financial incentives to encourage conservation and reclaimed water use.

In conducting the research and phone surveys, no other state was found to have a public utility tax deduction similar to Washington's program. Arizona and Texas provide a sales tax exemption for certain conservation and reclamation measures and have other incentives in place. Colorado, California, and Florida do not have tax incentive programs, but have other financial-incentive programs to encourage conservation and reclaimed water use.

Discussions with Arizona, California, Colorado, Florida, Texas, and the Water Re-use Association indicated general agreement that any incentive to encourage conservation and reclaimed water use can be important. However, few states have implemented tax incentives directly for reclaimed water use or conservation. Several parties recommended that instead of tax deductions, it would be more effective to use tax revenues to provide low-interest loans and grants for reclaimed water and conservation projects. Such incentives can also be made available to smaller utilities that do not generate enough revenue to be subject to the current public utility tax. A telephone survey of in-state reclaimed water projects also favored this option.

A brief description of the programs in the five states contacted follows:

Arizona

The state of Arizona provides an exemption from the 5.5 percent state sales tax on equipment for water plants, wastewater plants, and reclaimed-water plants. The state does not levy a public utility tax but does have an environmental charge as part of the water rate base.

Arizona regulates groundwater use in active management areas through the state Groundwater Management Act of 1980. The Arizona Department of Natural Resources establishes a gallons per capita per day (GPCD) limit for each city. The baseline is established based on existing use and it is ratcheted down from that point. Water utility plans must comply with this GPCD limit or they cannot grow. Reclaimed water use does not count against the GPCD. When groundwater is recharged with reclaimed water, the city receives credits within the zone of influence that can be used without counting against the GPCD. Credits can also be used during times of surface water drought.

To comply with the GPCD limit, there is a provision in the Phoenix city code mandating the installation of a reclaimed-water line to turf facilities greater than 10 acres. These include schools, parks, and golf courses. These facilities must take reclaimed water if it is available.

The state Groundwater Management Act also requires cities and private water companies to develop renewable water supplies and cease groundwater mining by the year 2025. Groundwater mining involves pumping groundwater at a rate that exceeds the recharge rate of the aquifer. If allowed to continue over the long term, mining would deplete the aquifer.

The Water Infrastructure Finance Authority of Arizona (WIFA) is an independent agency of the state authorized to finance the construction, rehabilitation, or improvement of drinking water, wastewater, wastewater reclamation, and other water quality facilities and projects. Generally, WIFA offers borrowers below-market interest on loans for 100 percent of eligible project costs. Only public jurisdictions are eligible for financial assistance including cities, towns, special districts, county improvement districts, sanitary districts, and Indian tribes.

California

California does not have a tax incentive program for encouraging conservation and reclamation, but does have several other incentive programs. The Department of Water Resources administers three bond laws that incorporate funding for water conservation. The Local Water Supply Loan (Proposition 82) and Local Projects Loan and Grant Program (Proposition 204) provide loans and grants on eligible construction projects and feasibility studies which include but are not limited to conservation. Propositions 82 and 204 are intended for use by local public agencies within small-population counties.

Water Conservation Program Loans & Grants (Proposition 13) provides loan and grant funding for urban and agricultural water conservation, infrastructure rehabilitation, and groundwater recharge. Proposition 13 is intended for use by public agencies and incorporated mutual water companies that have 200 to 1,600 connections, are located in an economically disadvantaged area, and deliver water for municipal, domestic, or industrial uses. California also uses the State Revolving Fund (SRF) to provide low-interest loans.

Since grant money is limited, and California requires a strong local commitment to reclamation projects, applicants must provide documentation of planning. The applicant must then complete design with its own money. Up to 15 percent of bid cost to cover design, engineering during construction, and legal and administrative costs may be reimbursed by the state. Grants are restricted to a maximum of 25 percent of the project with a $5 million cap. Applicants are not required to take a loan to access the grant money.

Projects can also be funded by the federal Bureau of Reclamation, which provides grants up to 25% of the project. The combined state and federal subsidy cannot exceed 45% of the project.

Another program, CALFED Bay Delta Program, is a cooperative effort of state and federal agencies with responsibility within the Bay Delta area. In 2001, CALFED created a Water Use Efficiency Program, which offered grants for agricultural and urban projects capable of reducing irrecoverable water losses and attaining water quality and environmental benefits. More than 115 proposals were returned requesting greater than $85 million. Fifty-three projects were awarded $11.7 million. Of that amount $5.9 million went to 23 agricultural projects and $5.8 million to 27 urban projects. Projects included education, feasibility studies, research, demonstration projects, canal projects, high efficiency washer rebates, and toilet replacement programs. This project appears to be successful and a similar program may be offered again.

California also has strong incentives for encouraging use of reclaimed water. At the local level, measures to attract users for reclaimed water include mandatory requirements for hookup when reclaimed water is available, and subsidized rates and connection fees. Rates charged for reclaimed water are usually 80 percent of potable-water rates.

A new California law, Water Recycling in Landscaping Act, SB 2095, requires any local public or private entity producing recycled water and determining that within 10 years it will provide recycled water within the boundaries of a local agency, to notify the local agency of the fact. The bill requires the local agency to adopt and enforce a specified recycled water ordinance within 180 days, if they do not already have one, requiring the use of recycled water in its jurisdiction prior to January 1, 2001. By imposing new duties on local legislative bodies, the bill creates a state-mandated local program. The act states that use of potable water for landscaped areas is considered a waste or unreasonable use of water if recycled water is available.

The ordinance shall include, but is not limited to, the following:

- State that it is the policy of the local agency that recycled water determined to be available shall be used for non-potable uses within the designated recycled water use area set forth by the local agency when the local agency determines that there is not a higher or better use for the recycled water and its use is financially and technically feasible for projects under consideration.

- Designate areas within the boundaries that can or may in the future use recycled water.

- Establish general rules and regulations governing use and distribution in accordance with applicable laws and regulations.

- Establish that use of recycled water is determined to be available in new industrial, commercial, or residential subdivisions located with the designated recycled water use area. Provisions shall require separate plumbing to service subdivision.

- Requires the recycled water service shall not commence except in accord with a written agreement between recycled water producer and water supplier.

Colorado

Colorado piloted a conservation grant program as part of one of their loan programs. The Colorado Water Conservation Board Construction Fund grants low-interest loans for water-resources projects. In 1992 and 1993, incentive grants were authorized from this fund in the amount of $500,000 for a pilot program demonstrating the benefits of municipal water efficiency measures (with a $50,000 maximum per agency). Remaining funds were allocated in 1997 as $5,000 block grants. In 1994, a new grant program was authorized which allotted $500,000 (with a $100,000 maximum per project) for 50 percent cost-sharing grants for agriculture and multipurpose water utilities.

Florida

Florida has both a sales tax and a municipal public service tax. However, the state does not use tax incentives to promote reclaimed water use or conservation. The state relies on laws and regulations to implement their program.

Rule 62-40.310(d), Florida Administrative Code, establishes a mandatory re-use program. It requires water management programs to "advocate and direct the re-use of reclaimed water as an integral part of water and wastewater management programs."

The water management districts accomplish this by designating "water resource caution areas," where critical water supply problems exist or are anticipated during the next 20 years, and by requiring the re-use of reclaimed water from domestic wastewater treatment facilities within these water resource caution areas – unless such re-use is not economically, environmentally, or technically feasible.

Rule 62-40.416 (4), Florida Administrative Code, enables the water management district to require re-use of reclaimed water outside of designated water resource caution areas, but only if the following criteria are met:

- Reclaimed water is readily available.

- Objective evidence demonstrates that re-use is economically, environmentally, and technically feasible.

- The water management district has adopted rules for re-use in these areas.

Florida does not provide funding assistance specifically for reclaimed water projects. However, there are three sources of financial assistance available for certain projects. The Department of Environmental Protection (DEP), through the Bureau of Water Facilities Funding, administers the State Revolving Loan Fund. It makes low-interest loans available for construction, rehabilitation, and replacement of facilities needed to collect, treat, dispose of, or re-use municipal wastewater.

A second source of funding is the State Financially Disadvantaged Small Community Grant program administered by DEP through Bureau of Water Facilities Funding. It makes available 65 to 85 percent grants for wastewater improvements to communities with populations of 7,500 or less, and in which per capita income is below the state average per capita income. The first grants were offered in July 2000.

The third source of funding is the State Bond Loan program jointly administered by the DEP and the Division of Bond Finance of the State Board of Administration. Cities, counties, districts, authorities, and other local agencies are eligible for this loan. This fund can be used for the construction of domestic wastewater and reclamation facilities.

Texas

Texas passed legislation, effective October 2001, that would provides a sales tax exemption for equipment, services, and supplies for water conservation, reclaimed water, rain water harvesting, desalination, cloud seeding, and brush control. The exemption also covers equipment, services, and supplies for regional water supply or wastewater services and public-private partnerships. Treatment facilities are also eligible for the sales tax exemption if solely used for reclamation purposes. The sales tax in Texas is 6.25 percent at the state level and varies at the local level. The exemption applies to both the state and local sales taxes.

Texas levies a public utility tax that applies to water supply services including reclaimed water. The rate differs based on the size of the city. For cities with populations over 10,000 people, the tax is 1.99 percent based on gross receipts. However, there appear to be no exemptions, credits, or deductions for water conservation purposes.

Texas also has agricultural conservation loan and grant programs. Eligible projects for the loan program include purchasing and installing more efficient irrigation equipment on private property. Interest rates were 1 percent or lower. Eligible projects for the grant program include purchase of equipment and evaluation or demonstration of efficient agricultural water uses. The grant matched 75 percent of the proposal.

VIII. Conclusions and Recommendations

The survey of water utilities, available tax data, and information obtained from other states indicates the following:

- The public utility tax appears to be an effective tool for a tax incentive for consumer-oriented water conservation measures and programs that could be done by water utilities. However, program participation by utilities likely would increase if the tax deduction were expanded from just consumer-oriented activities to include those that the utility itself can undertake – such as leak detection and control. Increasing the amount of savings obtainable by increasing the deduction or changing it to a tax credit would also likely make the tax incentive more effective.

- The public utility tax exemption for the sale of reclaimed water does not apply to most existing projects. For several reasons, most projects are not paying the public utility tax on reclaimed water. A sales tax exemption on the construction of the project or a property tax exemption on privately-owned projects might create a stronger incentive to build water reclamation projects.

- Experience of other states, as well as survey results, suggests that programs other than tax incentives – such as grants and low- or no-interest loans – may be more effective in encouraging conservation and recycling, and should be included when considering future incentives. Such incentives could also be made available to small systems that do not benefit from the current tax incentive because they do not generate enough revenue to be subject to the public utility tax.

- Agencies should improve communication efforts to make this program more widely known among utilities. Despite extensive efforts to inform utilities about the program, the survey indicated that a high number of utilities were not aware of the program's existence.

- To date, the tax incentive program has not resulted in any significant change in utility behavior to encourage more conservation on the part of their water customers. However, the new tax incentive program has not been in place long enough to fully evaluate its effectiveness. Also, the relatively short time that the program has been in place may be a factor contributing to the lack of knowledge by utilities about the tax incentive.